CLAIMS

1. A stimulation arrangement having a stimulation unit which is adapted to deliver electrical stimulation pulses for the stimulation of body tissue, and an evaluation unit which is adapted to receive electrical signals in conjunction with the delivery of a stimulation pulse and to evaluate same for checking stimulation success, characterised in that the evaluation unit is adapted to detect in the received signal such signal features which characterise a case of lack of stimulation success, and to deliver a corresponding output signal.

2. A stimulation arrangement as set forth in claim 1 characterised in that the evaluation unit is adapted to associate a received electrical signal with a stimulation pulse in respect of time and to detect a feature of a polarisation artefact as a signal feature in the received signal.

3. A stimulation arrangement as set forth in claim 2 characterised in that the evaluation unit is adapted to evaluate the signal measured after the expiry of a blanking period after the delivery of a stimulation pulse and for the purposes of detecting a feature of a polarisation artefact to determine a first integral (INGR1) of the measured signal over the time in which the signal measured after the blanking period extends above the signal amplitude during the blanking period.

4. A stimulation arrangement as set forth in claim 3 characterised in that the evaluation unit is adapted to determine a second integral (INGR2) of the measured signal over a period of time beginning with the moment in time at which the first integral ends, and which ends with the end of a predetermined time window which begins with the end of the blanking period.

5. A stimulation arrangement as set forth in claim 3 wherein the signal received after the delivery of a stimulation pulse is received in the

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form of time-discrete sample values, characterised in that the evaluation unit includes a counter which is adapted to determine the number (CNT1) of sample values of the received signal, which fall into the time over which the first integral is formed.

6. A stimulation arrangement as set forth in claim 4 characterised in that the evaluation unit is adapted to form an indicator flag (CROSS) whose value depends on whether the measured signal during the period for determining the second integral crosses the signal amplitude which obtains during the blanking period.

7. A stimulation arrangement as set forth in claims 1 through 6 characterised in that the evaluation unit is adapted to apply the following algorithm to an input signal:
If NEG_AMP<zn Then Capture
If CNT1>w1 Then AREA=INGR1+INGR2Else AREA=INGR2
If AREA<al Then Non-Capture
Elseif CNT1>w1 Then (If MAX_POS<zp Then Non-Capture Else Capture)
Elseif AREA>a2 Then Capture
Elseif CROSS = 1 Then Capture
Else Non-Capture.

8. A stimulation arrangement as set forth in one of claims 1 through 7 characterised in that the evaluation unit is adapted to continuously compare a received electrical signal to a limit value (zn) for the negative signal amplitude and in the case of the limit value (zn) being negatively exceeded to deliver a signal which characterises a stimulation success.

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